



THE ROLE OF BIOTECHNOLOGY IN COMBATting HUNGER IN DEVELOPING COUNTRIES

E. Anthony Wayne,
Assistant Secretary of State for Economic and Business Affairs;
before the Subcommittee on International Economic Policy, Export and
Trade Promotion of the Senate Committee on Foreign Relations,
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Dear Chairman Hagel:

Thank you for the opportunity to address for the record the potential of biotechnology in agriculture to help alleviate global hunger and poverty. As with any promising new technology with broad application, we have seen that there are legitimate questions and concerns. The U.S. Government has learned from experience the importance of ensuring public safety and confidence in new products while maintaining a climate conducive for economic growth and innovation. In the international arena as at home, we favor the consistent science-based, rules-based approach to assessing the opportunities and risks associated with new technologies, particularly those that affect food security and consumer welfare.

Biotechnology holds great promise to help alleviate poverty and hunger globally. To explore its potential effectively, we encourage the international community to avoid unnecessary restrictions or barriers to new technologies such as biotechnology, while proceeding with wisdom and care. We believe this can be done while protecting our domestic regulatory programs. We need transparency and the effective use of science-based decision making. Undue or unworkable trade restrictions or regulatory barriers, especially on agriculture, could raise food costs substantially and slow the safe development of biotechnology. It is true that many governments and companies are investing heavily in biotechnology, on which the U.S. has a strong start, and so it is obvious that its promise is not completely unknown abroad.

We believe it is important to enhance and share international understanding on the science of biotechnology. We also think that the consensus among scientists, that bioengineered foods are as safe as other foods, is finally getting traction. We have worked hard to encourage a balanced, calm, apolitical discussion of biotechnology. Many fears about bioengineered foods reflect a lack of complete knowledge about our solid regulatory system and of the basic science of biotechnology.

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The issue of biotechnology has serious implications for U.S. agricultural exports, for the trading system more generally, for global food security, and development, and for how we manage effectively the international approaches to the safety and environmental aspects of promising new technologies. For these reasons, the Department of State is fully engaged.

Our Under Secretary for Economic, Business, and Agricultural Affairs, Alan Larson, and I work closely in the interagency process on food safety and agricultural trade issues. We also take a coordinated approach on the environmental aspects of biotechnology with our Under Secretary for Global Affairs, Frank Loy, and with Assistant Secretary Sandalow's Bureau of Oceans and International Environmental and Scientific Affairs. We also work with Under Secretary for Public Diplomacy, Evelyn Lieberman, who has organized an interagency "public diplomacy working group" to help coordinate the biotech issue internationally. We interact regularly with the U.S. Department of Agriculture, the Food and Drug Administration, the Department of Commerce, the Environment and Protection Agency, the U.S. Agency for International Development (USAID), the U.S. Trade Representative, and both the National Economic Council and the Office of Science and Technology Policy at the White House on international discussions and negotiations on biotechnology. The Secretary of State has also engaged directly with her counterparts and with interested stakeholders to be sure we take a balanced and inclusive approach to this pathbreaking technology. And we are responding to many calls by U.S. constituents that we do still more.

We are making a very specific effort to address the interests of developing countries. Recently, we created a biotechnology working group under our Advisory Committee on International Economic Policy comprised of 60 members. Among other items, it will consider how we can better work with developing countries so that they benefit safely from biotechnology's potential contributions to health, nutrition, food security, and agricultural productivity. We have supported USAID, which is playing a very constructive role on biotechnology, to continue assisting in building the capacities of developing countries to adapt and use appropriately biotechnology to meet critical needs. Under Secretary Larson has met with the United Nations Food and Agriculture Organization (FAO) Director General Diouf and discussed what his organization can do to better support biotechnology in developing countries.

We have successfully pressed for attention to the interests of developing countries in recent discussions of biotechnology in both the Organization for Economic Cooperation and Development (OECD) and the G-8.

It is important to remember that while foods derived from bioengineered inputs or processes have been on the U.S. grocery shelves for less than a decade, farmers have been creating new plant species through genetic modification for centuries. Whether we call it risk-based decision making or scientific uncertainty, the precaution concept has been embedded in U.S. health and safety programs since 1906, and continues to be an essential element of the U.S. regulatory approach to food and environmental programs. U.S. farmers are proud of their long-standing commitment to providing customers with products of the highest quality and safety in the world. They have every incentive to maintain that quality, including in our exports, and the consumer confidence that it engenders.

President Clinton has underscored that this Administration, with the help of our outstanding regulatory agencies, will continue to maintain the highest standards of food safety, including biotechnology food products. The U.S. National Academy of Sciences published a report on April 6, 2000 that confirmed that the biotech food products currently on U.S. grocery shelves (estimated at 30,000 products, or 70% of all food sold in the U.S.) are as safe as traditional foods. Acknowledging that no new technology is risk-free, the study also stated the need for greater consideration of environmental risks and for continued assessment of regulatory approaches to food safety. We believe that such ongoing regulatory efforts will only improve our food safety system. We have also encouraged others in the international community to consider the value to consumer confidence and scientific innovation of having apolitical, science-based regulatory structures.

With the global population positioned to top nine billion or more in 30 years (up from six billion today), food security is of paramount concern. Land is fixed, water is scarce, and malnutrition seriously impacts child development in many developing countries. As Ismael Serageldin of the World Bank has noted, biotechnology plants and micro-organisms are fundamental tools to help improve food production to meet the growing demand for basic and nutritionally improved food, while reducing stresses on the environment caused by chemical pesticides and herbicides, over-tillage, water runoff, and conversion of existing wild habitats to agricultural uses.

Today an estimated 18% of the population in the developing world does not have access to sufficient food to meet their caloric and nutritional needs. Malnutrition kills 40,000 people every day. According to a number of studies, biotechnology has increased select crop yields by about 20% in particular areas, primarily due to reduction of loss to pests, increased flexibility in crop management, modification of plant architecture and development, and tolerance to salinity and drought.

Biotechnology may also already be contributing to a dramatic reduction of applications of chemical pesticides and herbicides. According to a study by the National Center for Food and Agricultural Policy, U.S. soybean growers made 16 million fewer active ingredient chemical applications in 1998 compared to 1995 (a 19% reduction). Scientists at the University of Arizona reported that U.S. biotech cotton farmers enjoyed a 22% yield increase and an average 30% reduction in pesticide use in 1998.

Improved food distribution and reduced energy consumption are other benefits from the use of biotechnology since scientists have successfully introduced genetic traits in fresh produce that prolong shelf life. Biotechnology is projected to be of major importance in the health care sector, where trials are advancing to store and deliver malaria and other vaccines worldwide, embedded in bananas, for example, thereby reducing the need for costly refrigeration, storage, and distribution. It would be irresponsible and inhumane not to try hard to develop safely the incredible benefits which biotechnology may be able to bring to people of all income brackets everywhere. We are convinced that it is important to do so, with care and cooperation.

On July 6, 2000, the 1,800 member International Society for Plant Molecular Biology joined more than 2,400 other scientists, including Nobel Prize winners, Norman Borlaug and James Watson, in

signing a petition endorsing biotechnology as a "powerful and safe technology that can contribute substantially to agriculture, health care, and the environment." On July 5, 2000, *The Wall Street Journal* reported that many scientists in the developing world have embraced the enormous potential of biotechnology. For example, Mexican researchers have bioengineered the world's first acid-soil crops, which reportedly could significantly boost yields on half the arable land in the tropics and save huge tracts of the forests.

Yet, globally, the U.S. Government and others who see the potential of biotechnology for agriculture are facing challenges, including from some in the European Union (EU), that threaten to slow the dissemination of this promising technology. The EU ambiguous approach to precaution is incongruent with the science-based, rules-based approach, which has served U.S. citizens and others very well.

Some believe recent EU actions are in part due to the serious food safety scandals that have eroded European consumer confidence in the regulatory agencies of the 15 EU member states, and to reports in Europe media which continue to link alleged risks of "Frankenfoods" with such real fears as beef from "mad cows." Heightened consumer fears in this atmosphere have heavily influenced public policy-making. The crisis in consumer confidence in Europe has overtaken the legislative and regulatory process. In addition, there are interest groups in Europe, such as subsidized industrial agriculture, and organic production supporters, with their own agenda that are pleased to support these developments. The result creates problems for the U.S. in terms of trade, and could affect the world's ability to benefit from the development of this technology.

A European Commission White Paper on Food Safety published in February, 2000, projects that over 200 new food safety regulations will be proposed by 2001, affecting biotech seeds, crops, commodities, and processed food and feed products. While the U.S. has adapted and successfully implemented a risk-based approach to food and environmental safety, the EU approach is currently based on a notion they call the "precautionary principle" which is vague and undefined and seems to leave product approval open to political judgement rather than science-based evidence. Discussion in the EU of new standards for agricultural biotechnology could impose fresh regulatory burdens on EU economies and even slow or derail the development of the technology worldwide, without scientific documentation of the potential risks. The impact is already evident; no bioengineered crops have been approved in EU countries for over 2 years. In the EU, the costs of production, and ultimately food prices, may rise. Dependence on heavy pesticide use may continue. The much-lamented "brain drain" of European scientists and academicians leaving to conduct their research in the U.S. may continue.

There would also be consequences beyond Europe. Many long-anticipated biotech breakthroughs may be delayed, as the EU works to convince others of its approach. "Golden rice," for example, was funded and developed by the Rockefeller Foundation and the EU, and the scientists pledged to find ways to adapt this technology to the developing world. ("Golden rice" contains additional beta-carotene to prevent the severe Vitamin A deficiency that contributes to blindness or death for millions of children per year and the iron deficiency that causes birth complications for a billion women and their babies.) However, according to the *Journal of Science*, under pressure by groups opposed to biotechnology, the EU has now diminished funding for plant biotechnology research.

"Golden rice" research was among the projects that did not get further funding. USAID now plans to support the adaptation of "golden rice" to the developing world.

Another aspect of this problem is the very serious access problem the Europeans have created for U.S. bioengineered crops. U.S. corn exporters are losing \$200 million annually in exports since 1998, and other agricultural sectors are threatened because of the internal EU paralysis over handling biotechnology and agriculture. Not only this, the EU is endeavoring to convince others to adopt its restrictive and ambiguous approach.

As a result, U.S. Government agencies have become extremely active in the international arena, through organizations such as the FAO and World Health Organization-sponsored Codex Alimentarius to ensure that biotech agricultural products and foods are not singled out, demonized, or over-regulated and, at the same time, that actual risks are appropriately controlled. Here, too, we are working with developing countries to understand their viewpoints and interests, and to share our concerns.

We are making strenuous efforts through the OECD process and the G-8 Summits of major industrialized nations. We have also proposed that biotechnology be addressed in the ongoing agriculture negotiations at the World Trade Organization.

We will continue to seek workable paths forward with the EU to overcome their concerns, while explaining our reservations with their proposed approaches. President Clinton discussed biotechnology with EC President Prodi last October and at the December 1999 U.S.-EU Summit. President Clinton and his EU counterparts committed to establishing a "two-track" approach to addressing biotechnology issues. The first track consists of a government-to-government dialogue among senior level officials from U.S. agencies and the European Commission to help resolve some of the problems and move the issue forward. The second track consists of the creation of a Consultative Forum of eminent non-government persons from both sides of the Atlantic to address a variety of issues related to biotechnology and to provide a report in time for the December, 2000 U.S.-EU Summit. The forum may also address related aspects of the agricultural biotechnology issue, including consumer choice, environmental factors, ethics and the interests of developing countries.

The U.S. participants in the U.S.-EU Consultative Forum include eminent persons such as Nobel laureate Norman Borlaug and the Rockefeller Foundation's Gordon Conway. We hope that the work of this Forum of respected experts in their fields will help Europe move toward a reasoned discussion of the issues related to biotechnology, particularly agricultural biotechnology and its potential benefits for sustainable development. We have also engaged bilaterally with the EU through the Transatlantic Economic Partnership Biotechnology Working Group.

We have also launched energetic diplomatic and outreach efforts to urge a careful, science-based approach to bolster international consumer confidence that biotech products are regulated effectively, and with a view toward maintaining high U.S. standards for food safety and environmental protection. Our program consists of the creation and maintenance of a website on

biotech issues, and the initiation of seminars, visitors programs, op eds, and videoconferences worldwide. We have also initiated ongoing outreach to foreign press and non-government organizations.

Our Embassies around the world are doing yeoman's work to help raise awareness on this issue and to convey that we seek a balanced approach to fair market access while addressing consumer and environmental concerns. We have encouraged an awareness of the current and potential benefits of this technology, stressed that we believe it can play a very positive role in developing countries, and made clear that we seek to ensure that the concrete benefits of biotechnology agriculture are shared worldwide, while assuring a careful, science-based regulatory approach.

Since February, 2000, the Department of State Bureau of Economic and Business Affairs assumed responsibility for coordinating the U.S. Government's interaction with the Transatlantic Consumer Dialogue (TACD) to further the exchange of ideas between policy-makers and non-government organizations. Biotechnology has been one of the main topics of discussion by U.S. and EU Government officials, along with U.S. and European consumer groups, comprising the TACD. U.S. consumer groups in the TACD trade working group discussed biotechnology when they met on June 21, 2000 and the U.S. consumer groups in the TACD food working group will likely discuss the issue with U.S. Government officials July 19, 2000. We expect the U.S. and EU Government and NGO participants in the TACD to examine biotechnology issues again when they meet on September 14-15, 2000 in Paris.

Despite these efforts, we are aware we are in an age where sound bites shape public opinion and that more is needed to convey our arguments for a careful, science-based approach and to make them comprehensible to consumers, and even to many policymakers in developed and developing countries. We will continue to focus our energy to ensure that short-term political pressures surrounding the biotech issue do not endanger our longstanding rules-based, science-based approach to trade. The rules-based approach has allowed trade and innovation to flourish and is the best means for the promise of biotechnology to contribute to the fight against hunger and poverty around the world.

Per capita food production has risen 25% since 1990, without commensurate increase in land use, and global food trade has kept prices down and hunger in check in many countries. All of which has provided great benefits for people worldwide. To sustain and multiply these positive results, the Department of State will, working closely with other government agencies, remain vigorously committed to resolving outstanding issues in a rational, science-based way in the multilateral fora where biotechnology and agriculture are being addressed.

We hope these efforts will contribute significantly to alleviate global hunger and poverty. Thank you Chairman Hagel for the opportunity to address these important issues.

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